IN THE CLAIMS:

Please amend the claims as follows:

1. (original) A system for producing electrospray ions comprising:

a thermal inkjet material dispenser configured to selectively emit a plurality of sample material particles; and

an electrically conducting grid disposed in proximity with said thermal inkjet material dispenser;

said grid being configured to permit a selective passage of said plurality of sample material particles.

2. (original) The system of claim 1, wherein said electrically conducting grid is disposed between approximately 0.5 cm and 3.0 cm from said thermal inkjet material dispenser.

3. (original) The system of claim 1, further comprising a sample material reservoir fluidly coupled to said thermal inkjet material dispenser.

4. (original) The system of claim 3, wherein said reservoir is configured to house a jettable sample material.

5. (original) The system of claim 1, further comprising a counter electrode disposed adjacent to said electrically conducting grid.

6. (original) The system of claim 5, wherein said grid and said counter electrode are configured to produce a potential sufficient to generate electrospray ions from said plurality of sample material particles.

7. (original) The system of claim 6, wherein said potential comprises between approximately 3 to 5 kilovolts.

8. (original) The system of claim 1, wherein said thermal inkjet material dispenser further comprises:

a material firing chamber;

a heating component disposed within said material firing chamber; and

an orifice extending into said material firing chamber.

9. (original) The system of claim 8, further comprising a second orifice extending into said material firing chamber.

10. (original) The system of claim 8, wherein said electrically conducting grid is disposed adjacent to said orifice.

11. (original) The system of claim 1, wherein said electrically conducting grid comprises a metal.

12. (original) The system of claim 11, wherein said electrically conducting grid comprises stainless steel.

13. (original) The system of claim 1, further comprising:

an ion lens disposed in proximity with said electrically conducting grid; and

a mass spectrometer associated with said ion lens;

wherein said ion lens is configured to direct an ionic sample material particle into said mass spectrometer.

14. (original) The system of claim 13, wherein said ion lens comprises an Einzel/ion lens.

15. (original) The system of claim 13, wherein said mass spectrometer comprises a time-of-flight mass spectrometer.

16. (original) The system of claim 1, wherein said thermal inkjet material dispenser is configured to produce said plurality of sample material particles at a frequency between approximately 1 kHz and 200 kHz.

17. (original) The system of claim 16, wherein said thermal inkjet material dispenser is configured to produce a plurality of sample material particle volumes when operating at said frequency;

wherein said sample material particle volumes range from approximately 5 picoliters (pL) to approximately 140 pL.

18. (original) The system of claim 16, wherein said thermal inkjet material dispenser is configured to produce said sample material particles as a pulsed flow.

19. (original) The system of claim 1, further comprising:

a computing device communicatively coupled to said thermal inkjet material dispenser;

said computing device being configured to control an emission of said sample material particles from said thermal inkjet material dispenser.

20. (original) The system of claim 19, wherein said computing device comprises one of a personal computer, a laptop computer, a personal digital assistant (PDA), a palm computer, a tablet computer, or a processor.

21. (original) A method for using a thermal inkjet material dispenser as an electrospray ion source comprising:

emitting a plurality of small droplets of a sample material from said thermal inkjet material dispenser;

passing said droplets of sample material through an electrically conductive grid disposed adjacent to said thermal inkjet material dispenser;

generating a voltage potential between said grid and a counter electrode; and

performing an electrospray process on said droplets as they are attracted from said grid to said counter electrode.

22. (original) The method of claim 21, further comprising maintaining said grid at a ground potential during the emission of said plurality of small droplets from said thermal inkjet material dispenser.

23. (original) The method of claim 21, wherein said emitting a plurality of small droplets of a sample material comprises:

filling a material firing chamber with a desired jettable material;

heating a heating component of said thermal inkjet material dispenser sufficient to vaporize a portion of said desired jettable material;

wherein said vaporization forces an unvaporized quantity of said desired jettable material out of said thermal inkjet material dispenser toward said electrically conductive grid.

24. (original) The method of claim 23, wherein said step of generating a plurality of small droplets further comprises generating a pack of small droplets.

25. (original) The method of claim 21, wherein said voltage potential generated between said grid and said counter electrode comprises between approximately 3 kilovolts to approximately 5 kilovolts.

26. (original) The method of claim 21, wherein said electrospray process is configured to produce a plurality of ions.

27. (original) The method of claim 26, further comprising focusing said generated ions towards a mass spectrometer.

28. (original) The method of claim 27, wherein said focusing said generated ions further comprises focusing said generated ions with an Einzel/ion lens associated with said mass spectrometer.

29. (original) The method of claim 27, wherein said mass spectrometer comprises a time-of-flight mass spectrometer.

30. (original) A thermal inkjet material dispenser configured to function as an electrospray ion source comprising:

a thermal inkjet material dispenser body configured to selectively emit a plurality of sample material particles;

an electrically conducting grid disposed adjacent to said thermal inkjet material dispenser body; and

said grid being configured to selectively permit a passage of said plurality of sample material particles.

31. (original) The thermal inkjet material dispenser of claim 30, wherein said thermal inkjet material dispenser body further comprises:

a material firing chamber;

a heating component disposed within said material firing chamber; and

an orifice extending into said material firing chamber.

32. (original) The thermal inkjet material dispenser of claim 31, further comprising a second orifice extending into said material firing chamber.

33. (original) The thermal inkjet material dispenser of claim 31, wherein said electrically conducting grid is disposed between approximately 0.5 cm and 3.0 cm from said orifice.

34. (original) The thermal inkjet material dispenser of claim 31, further comprising a sample material reservoir fluidly coupled to said thermal inkjet material dispenser body.

35. (original) The thermal inkjet material dispenser of claim 34, wherein said sample material reservoir is configured to house a jettable sample material.

36. (original) The thermal inkjet material dispenser of claim 30, wherein said electrically conducting grid comprises a metal.

37. (original) The thermal inkjet material dispenser of claim 36, wherein said electrically conducting grid comprises stainless steel.

38. (original) The thermal inkjet material dispenser of claim 30, wherein said thermal inkjet material dispenser body is configured to produce said plurality of sample material particles at a frequency between approximately 1 kHz and 200 kHz.

39. (original) The thermal inkjet material dispenser of claim 38, wherein said thermal inkjet material dispenser body is configured to produce a plurality of sample material particle volumes;

said plurality of sample material particle volumes ranging from approximately 5 picoliters (pL) to 140 pL when operating at said frequency.

40. (original) The thermal inkjet material dispenser of claim 38, wherein said thermal inkjet material dispenser is configured to produce said sample material particles as a pulsed flow.

41. (original) A system for producing electrospray ions comprising:

a means for thermally actuating the discharge of a plurality of sample material particles;

a means for emitting said sample material particles disposed adjacent to said means for thermally actuating a discharge, said means for emitting being configured to selectively apply a voltage potential; and

said means for emitting being configured to permit a passage of said plurality of sample material particles.

42. (original) The system of claim 41, wherein said means for emitting said sample material particles is disposed between approximately 0.5 cm and 3.0 cm from said means for thermally actuating a discharge.

43. (original) The system of claim 41, further comprising:

a means for storing sample material;

said means for storing being fluidly coupled to said means for thermally actuating a discharge.

44. (original) The system of claim 41, further comprising a counter electrode disposed adjacent to said means for emitting said sample material particles.

45. (original) The system of claim 44, wherein said means for emitting said sample material particles and said counter electrode are configured to produce a potential sufficient to generate electrospray ions from said sample material particles.

46. (original) The system of claim 45, wherein said potential comprises between approximately 3 to 5 kilovolts.

47. (original) The system of claim 41, wherein said means for emitting said sample material particles comprises a metal grid.

48. (original) The system of claim 47, wherein said metal grid comprises stainless steel.

49. (original) The system of claim 41, further comprising:

a means for channeling an ion; and

a mass spectrometer associated with said means for channeling an ion;

wherein said means for channeling an ion is configured to direct an ionic sample material particle into said mass spectrometer.

50. (original) The system of claim 49, wherein said mass spectrometer comprises a time-of-flight mass spectrometer.

51. (original) The system of claim 41, wherein said means for thermally actuating a discharge is configured to produce said plurality of sample material particles at a frequency between approximately 1 kHz and 200 kHz.

52. (original) The system of claim 51, wherein said means for thermally actuating a discharge is configured to produce a plurality of sample material particle volumes ranging from 5 picoliters (pL) to 140 pL when operating at said frequency.

53. (original) The system of claim 41, wherein said means for thermally actuating a discharge is configured to produce said sample material particles as a pulsed flow.

54. (new) A method for inputting a sample material to a mass spectrometer using a thermal inkjet material dispenser as an electrospray ion source, said method comprising:

emitting a plurality of droplets of said sample material from said thermal inkjet material dispenser for use by said spectrometer.

55. (new) The method of claim 54, wherein emitting a plurality of droplets further comprises:

passing said droplets of sample material through an electrically conductive grid disposed adjacent to said thermal inkjet material dispenser;

generating a voltage potential between said grid and a counter electrode; and

performing an electrospray process on said droplets as they are attracted from said grid to said counter electrode.

56. (new) The method of claim 55, further comprising maintaining said grid at a ground potential during the emission of said plurality of small droplets from said thermal inkjet material dispenser.

57. (new) The method of claim 55, wherein said emitting a plurality of droplets of a sample material comprises:

filling a material firing chamber with a desired jettable material;

heating a heating component of said thermal inkjet material dispenser sufficient to vaporize a portion of said desired jettable material;

wherein said vaporization forces an unvaporized quantity of said desired jettable material out of said thermal inkjet material dispenser toward said electrically conductive grid.

58. (new) The method of claim 55, wherein said voltage potential generated between said grid and said counter electrode comprises between approximately 3 kilovolts to approximately 5 kilovolts.

59. (new) The method of claim 55, wherein said electrospray process is configured to produce a plurality of ions.

60. (new) The method of claim 59, further comprising focusing said generated ions towards said mass spectrometer.

61. (new) The method of claim 60, wherein said focusing said generated ions further comprises focusing said generated ions with an Einzel/ion lens associated with said mass spectrometer.

62. (new) The method of claim 54, wherein said mass spectrometer comprises a time-of-flight mass spectrometer.

63. (new) A mass spectrometer system having a thermal inkjet material dispenser configured to function as an electrospray ion source comprising:

a thermal inkjet material dispenser configured to selectively emit a sample material;

a mass spectrometer configured to receive said sample material for analysis.

64. (new) The system of claim 63, further comprising a system for directing said sample material from said thermal inkjet material dispenser to said mass spectrometer comprising an electrically conducting grid disposed adjacent to said thermal inkjet material dispenser body. said grid being configured to selectively permit a passage of said sample material.

65. (new) The system of claim 63, wherein said thermal inkjet material dispenser body further comprises:

a material firing chamber; and

a heating component disposed within said material firing chamber.

66. (new) The system of claim 63, further comprising a sample material reservoir fluidly coupled to said thermal inkjet material dispenser.

67. (new) The system of claim 63, wherein said thermal inkjet material dispenser is configured to selectively emit droplets of said sample material at a frequency between approximately 1 kHz and 200 kHz.

68. (new) The system of claim 63, wherein said thermal inkjet material dispenser is configured to selectively emit a range of volumes of said sample material.

69. (new) The system of claim 68, wherein said range is from approximately 5 picoliters (pL) to 140 pL.

70. (new) The system of claim 63, wherein said thermal inkjet material dispenser is configured to emit said sample material as a pulsed flow.